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Jain Institute of Technology

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name	Calculus and Linear Algebra	Semester	1
Course code	18MAT11	Batch	2018 - 2022

Course Outcomes

C101.1	Apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve.
C101.2	Learn the notion of partial differentiation to calculate rates of change of multivariate functions and solve problems related to composite functions and jacobians.
C101.3	Apply the concept of change of order of integration and variables to evaluate multiple integrals and their usage in computing the area and volumes.
C101.4	Solve first order linear /nonlinear differential equation analytically using standard methods.
C101.5	Make use of matrix theory for solving system of linear equations and compute eigenvalues and eigenvectors required for matrix diagonalization process.



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Course Name	Engineering Physics	Semester	2
Course code	18PHY12/22	Batch	2018 - 2022

Course Outcomes

C102.1	Understand various types of oscillations and their implications, the role of shock waves in various fields.
C102.2	Recognize the elastic properties of materials for engineering applications.
C102.3	Realize the magnetic interrelation between time varying electric field and field, the transverse nature of electromagnetic waves and their role in optical fibre communication.
C102.4	Compute Eigen values, Eigen functions, and momentum of atomic and subatomic particles using time independent Schrodinger wave one-dimensional applications equation and extended to the design of lasers and its
C102.5	Apprehend and materials such as conductors, semiconductors and dielectrics using different theoretical models.



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Course Name	Engineering Chemistry	Semester	1
Course code	18CHE12/22	Batch	2018 - 2022

Course Outcomes

C103.1	Use of free energy in equilibria, rationalize bulk properties and processes using thermodynamic considerations, electrochemical energy systems.
C103.2	Causes & effects of corrosion of metals and control of corrosion. Modification of surface properties of metals to develop resistance to corrosion, wear, tear, impact etc. by electroplating and electroless plating.
C103.3	Production and consumption of energy for industrialization of country and living standards of people. Electrochemical and concentration cells. Classical, modern batteries and fuel cells. Utilization of solar energy for different useful forms of energy.
C103.4	Environmental pollution, waste management and water chemistry.
C103.5	Different techniques of instrumental methods of analysis. Fundamental principles of nano materials.



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Course Name	Basic Electrical Engineering	Semester	1
Course code	18ELE13/23	Batch	2018 - 2022

Course Outcomes

C104.1	Analyse D.C and A.C circuits.
C104.2	Explain the principle of operation and construction of single-phase transformers.
C104.3	Explain the principle of operation and construction of DC machines and synchronous machines.
C104.4	Explain the principle of operation and construction of three phase induction motors.
C104.5	Discuss concepts of electrical wiring, circuit protecting devices and earthing.



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Course Name	C Programming for Problem	Semester	2
Course code	18CPS13/23	Batch	2018 - 2022

Course Outcomes

C105.1	Illustrate simple algorithms from the different domains such as mathematics, physics, etc.
C105.2	Construct a programming solution to the given problem using C.
C105.3	Identify and correct the syntax and logical errors in C programs.
C105.4	Modularize the given problem using functions and structures.



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Course Name	Elements of Civil Engineering	Semester	1
Course code	18CIV14/24	Batch	2018 - 2022

Course Outcomes

C106.1	Understand the Various Fields of Civil Engineering.
C106.2	Compute the resultant of force system & resolution of forces.
C106.3	Locate the centroid and compute the moment of inertia of regular & built-up sections.
C106.4	Comprehend the action of forces, moments and other types of loads on rigid bodies and compute the reactive forces.
C106.5	Analyse the Bodies In Motion.



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Course Name	Basic Electronics	Semester	1
Course code	18ELN14/24	Batch	2018 - 2022

Course Outcomes

C107.1	Understand the characteristics of diode, zener diode, rectifiers, capacitor filter circuits, photo diode, LED, photo coupler.
C107.2	Understand the construction & operation of FETs, CMOS, SCR operation and characteristics.
C107.3	Understand the op-amp operation, input modes, Ideal characteristics, applications and comparator.
C107.4	Understand the BJT operation, feedback amplifiers-principles, gain stability with feedback, oscillators, IC 555 Timer, astable oscillator using IC 555.
C107.5	Understand the basics of digital electronics using logic gates, Boolean algebra and realization of Boolean functions using universal gates, half and full adder designing, MUX, Decoder, shift register, ring counter, communication system, principle of mobile phone.



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Course Name	Engineering Physics Lab	Semester	1
Course code	18PHYL16/26	Batch	2018 - 2022

Course Outcomes

C110.1	Apprehend the concepts of interference of light, diffraction of light and total internal reflection of light.
C110.2	Understand the principles of operation of semiconductor devices photodiode and transistor using simple circuits.
C110.3	Determine spring constant, elastic moduli and moment of inertia of rigid bodies with the help of suggested procedure.
C110.4	Recognize the concept of resonance and practical applications.
C110.5	Understand the magnetic effect of electric current, thermal, electrical and dielectric properties of materials.



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Course Name	Engineering Chemistry Lab	Semester	1
Course code	18CHEL16/26	Batch	2018 - 2022

Course Outcomes

C111.1	Handling different types of instruments for analysis of materials using small quantities of materials involved for quick and accurate results.
C111.2	Carrying out different types of titrations for estimation of concerned in materials using comparatively more quantities of materials involved for good results.



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Course Name	Basic Electrical Engineering Lab	Semester	1
Course code	18ELEL17/27	Batch	2018 - 2022

Course Outcomes

C112.1	Identify the common electrical components and measuring instruments used for conducting experiments in the electrical laboratory.
C112.2	Compare power factor of lamps.
C112.3	Determine impedance of an electrical circuit and power consumed in a 3-phase load.
C112.4	Determine earth resistance and understand two way and three-way control of lamps.



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Course Name	C Programming Lab	Semester	1
Course code	18CPL17/27	Batch	2018 - 2022

Course Outcomes

C113.1	Write algorithms, flowcharts and program for simple problems.
C113.2	Correct syntax and logical errors to execute a program.
C113.3	Write iterative and wherever possible recursive programs.
C113.4	Demonstrate use of functions, arrays, strings, structures and pointers in problem solving



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Course Name	Technical English I	Semester	1
Course code	18EGH18	Batch	2018 - 2022

Course Outcomes

C114.1	Use grammatical English and essentials of language skills and identify the nuances of phonetics, intonation and flawless pronunciation.
C114.2	Implement English vocabulary at command and language proficiency.
C114.3	Identify common errors in spoken and written communication.
C114.4	Understand and improve the non-verbal communication and kinesics.
C114.5	Perform well in campus recruitment, engineering and all other general competitive examinations.



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Course Name	Advance Calculus and Numerical Methods	Semester	1
Course code	18MAT21	Batch	2018 - 2022

Course Outcomes

C115.1	Illustrate the applications of multivariate calculus to understand the solenoidal and irrotational vectors and also exhibit the inter dependence of line, surface and volume integrals.
C115.2	Demonstrate various physical models through higher order differential equations and solve such linear ordinary differential equations.
C115.3	Construct a variety of partial differential equations and solution by exact methods/method of separation of variables.
C115.4	Explain the applications of infinite series and obtain series solution of ordinary differential equations.
C115.5	Apply the knowledge of numerical methods in the modelling of various physical and engineering phenomena.



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Course Name	Technical English II	Semester	1
Course code	18EGH28	Batch	2018 - 2022

Course Outcomes

C116.1	Identify common errors in spoken and written communication.
C116.2	Get familiarized with English vocabulary and language proficiency.
C116.3	Improve nature and style of sensible writing and acquire employment and workplace communication skills.
C116.4	Improve their technical communication skills through technical reading and writing practices.
C116.5	Perform well in campus recruitment, engineering and all other general competitive examinations.



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Course Name	Transform Calculus, Fourier Series And Numerical Techniques	Semester	3
Course code	18MAT31	Batch	2018 - 2022

Course Outcomes

C301.1	Use Laplace transform and inverse Laplace transform in solving differential/integral equation arising in network analysis, control systems and other fields of engineering.
C301.2	Demonstrate Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.
C301.3	Make use of Fourier transform and Z-transform to illustrate discrete/continuous function arising in wave and heat propagation, signals and systems.
C301.4	Solve first and second order ordinary differential equations arising in engineering problems using single step and multistep numerical methods
C301.5	Determine the external of functionals using calculus of variations and solve problems arising in dynamics of rigid bodies and vibrational analysis



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Course Name	Data Structures and Applications	Semester	3
Course code	18CS32	Batch	2018 - 2022

Course Outcomes

C302.1	Use different types of data structures, operations and algorithms.
C302.2	Apply searching and sorting operations on files.
C302.3	Use stack, Queue, Lists, Trees and Graphs in problem solving.
C302.4	Implement all data structures in a high-level language for problem solving.



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Course Name	Analog & Digital Electronics	Semester	3
Course code	18CS33	Batch	2018 - 2022

Course Outcomes

C303.1	Design and analyze application of analog circuits using photo devices, timer IC, power supply and regulator IC and op-amp.
C303.2	Explain the basic principles of A/D and D/A conversion circuits and develop the same.
C303.3	Simplify digital circuits using Karnaugh Map , and Quine-McClusky Methods.
C303.4	Explain Gates and flip flops and make us in designing different data processing circuits, registers and counters and compare the types.
C303.5	Develop simple HDL programs.



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Course Name	COMPUTR ORGANIZATION	Semester	3
Course code	18CS34	Batch	2018 - 2022

Course Outcomes

C304.1	Explain the basic organization of a computer system.
C304.2	Demonstrate functioning of different sub systems, such as processor, Input/output, and memory.
C304.3	Illustrate hardwired control and micro programmed control. pipelining, embedded and other computing systems
C304.4	Design and analyze simple arithmetic and logical units.



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Course Name	Software Engineering	Semester	3
Course code	18CS35	Batch	2018 - 2022

Course Outcomes

C305.1	Design a software system, component, or process to meet desired needs within realistic constraints.
C305.2	Assess professional and ethical responsibility.
C305.3	Function on multi-disciplinary teams.
C305.4	Use techniques, skills and modern engineering tools necessary for engineering practice.
C305.5	Analyze, design, implement, verify, validate, implement, apply and maintain software systems or parts of software systems



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Course Name	Discrete Mathematical Structures	Semester	3
Course code	18CS36	Batch	2018 - 2022

Course Outcomes

C306.1	Demonstrate the correctness of an argument using propositional and predicate logic, and truth tables.
C306.2	Demonstrate the properties of Integers & fundamental principles of Counting.
C306.3	Make use of Relation and Function's properties to solve logical problems.
C306.4	Solve problems involving principle of Inclusion & Exclusion, and recurrence relations.
C306.5	Explain the fundamentals of Graphs and Trees.



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Course Name	Analog & Digital Electronics Lab	Semester	3
Course code	18CSL37	Batch	2018 - 2022

Course Outcomes

C307.1	Design and demonstrate various combinational logic circuits.
C307.2	Design and demonstrate various types of counters and Registers using Flip-flops.
C307.3	Design Analog and Digital Circuits using Simulation package.
C307.4	Design Multivibrator, Relaxation Oscillator, Window comparator circuits.



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Course Name	Data Structures Laboratory	Semester	3
Course code	18CSL38	Batch	2018 - 2022

Course Outcomes

C308.1	Analyze and Compare various linear and non-linear data structures.
C308.2	Code, debug and demonstrate the working nature of different types of data structures and their applications.
C308.3	Implement, analyze and evaluate the searching and sorting algorithms.
C308.4	Choose the appropriate data structure for solving real world problems.



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Course Name	COMPLEX ANALYSIS, PROBABILITY AND STATISTICAL METHODS	Semester	4
Course code	18MAT41	Batch	2018 - 2022

Course Outcomes

C401.1	Use the concepts of analytic function and complex potentials to solve the problems arising in electromagnetic field theory.
C401.2	Utilize conformal transformation and complex integral arising in aerofoil theory, fluid flow visualization and image processing.
C401.3	Apply discrete and continuous probability distributions in analyzing the probability models arising in engineering field.
C401.4	Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data.



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Course Name	DESIGN AND ANALYSIS OF ALGORITHMS	Semester	4
Course code	18CS42	Batch	2018 - 2022

Course Outcomes

C402.1	Describe computational solution to well known problems like searching, sorting etc.
C402.2	Estimate the computational complexity of different algorithms.
C402.3	Devise an algorithm using appropriate design strategies for problem solving.



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Course Name	OPERATING SYSTEMS	Semester	4
Course code	18CS43	Batch	2018 - 2022

Course Outcomes

C403.1	Demonstrate need for OS and different types of OS
C403.2	Apply suitable techniques for management of different resources
C403.3	Use processor, memory, storage and file system commands
C403.4	Realize the different concepts of OS in platform of usage through case studies



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Course Name	MICROCONTROLLER AND EMBEDDED SYSTEMS	Semester	4
Course code	18CS44	Batch	2018 - 2022

Course Outcomes

C404.1	Describe the architectural features of ARM microcontroller.
C404.2	Describe the instructions of ARM microcontroller. Apply the knowledge gained for Programming ARM for different applications
C404.3	Interface external devices and I/O with ARM microcontroller. & Interpret the basic hardware components and their selection method based on the characteristics and attributes of an embedded system.
C404.4	Develop the hardware /software co-design and firmware design approaches. Demonstrate the need of real time operating system for embedded system applications



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Course Name	OBJECT ORIENTED CONCEPTS	Semester	4
Course code	18CS45	Batch	2018 - 2022

Course Outcomes

C405.1	Explain the object-oriented concepts and JAVA.
C405.2	Develop computer programs to solve real world problems in Java.
C405.3	Develop simple GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles using swings.



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Course Name	Data Communication	Semester	4
Course code	18CS46	Batch	2018 - 2022

Course Outcomes

C406.1	Explain the various components of data communication.
C406.2	Explain the fundamentals of digital communication and switching.
C406.3	Compare and contrast data link layer protocols.
C406.3	Summarize IEEE 802.xx standards



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Course Name	Design and Analysis of Algorithms Lab	Semester	4
Course code	18CSL47	Batch	2018 - 2022

Course Outcomes

C407.1	Design algorithms using appropriate design techniques (brute-force, greedy, dynamic programming, etc.).
C407.2	Implement a variety of algorithms such as sorting, graph related, combinatorial, etc., in a high level language.
C407.3	Analyze and compare the performance of algorithms using language features.
C407.3	Apply and implement learned algorithm design techniques and data structures to solve real-world problems.



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Course Name	Microcontroller and Embedded Systems Lab	Semester	4
Course code	18CSL48	Batch	2018 - 2022

Course Outcomes

C408.1	Describe the architectural features of ARM microcontroller. Interpret the basic hardware and Software components of an embedded system.
C408.2	Describe the instructions of ARM microcontroller and Employ the knowledge of Instruction set of ARM processors to develop basic Assembly Language Programs.
C408.3	Interpret the selection method based on the characteristics and attributes of an embedded system and develop the hardware /software co-design, firmware design approaches.
C408.3	Demonstrate the need of real time operating system for embedded system applications.



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Course Name	CONSTITUTION OF INDIA, PROFESSIONAL ETHICS AND CYBER LAW (CPC)	Semester	4
Course code	18CPC39/49	Batch	2018 - 2022

Course Outcomes

C409.1	Have constitutional knowledge and legal literacy.
C409.2	Understand Engineering and Professional ethics and responsibilities of Engineers.
C409.3	Understand the the cybercrimes and cyber laws for cyber safety measures.



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Course Name	Management, Entrepreneurship for IT industry	Semester	5
Course code	18CS51	Batch	2018 - 2022

Course Outcomes

C501.1	Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship.
C501.2	Utilize the resources available effectively through ERP.
C501.3	Make use of IPRs and institutional support in entrepreneurship.



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Course Name	Computer Networks and Security	Semester	5
Course code	18CS52	Batch	2018 - 2022

Course Outcomes

C502.1	Explain Principles of applications layer Protocols.
C502.2	Recognize transport layer services and infer UDP and TCP protocols.
C502.3	Classify routers, IP and Routing Algorithms in network layer.
C502.4	Understand the Wireless and Mobile Applications Covering IEEE 802.11.
C502.5	Describe Multimedia Networking and Network Management.



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Course Name	Database Management System	Semester	5
Course code	18CS53	Batch	2018 - 2022

Course Outcomes

C503.1	Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
C503.2	Use Structured Query Language (SQL) for database manipulation.
C503.3	Design and build simple database systems.
C503.4	Develop application to interact with databases.



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Course Name	Automata Theory and Computability	Semester	5
Course code	18CS54	Batch	2018 - 2022

Course Outcomes

C504.1	Acquire fundamental understanding of the core concepts in automata theory and Theory of Computation.
C504.2	Learn how to translate between different models of Computation (e.g., Deterministic and Non-deterministic and Software models).
C504.3	Design Grammars and Automata (recognizers) for different language classes and become knowledgeable about restricted models of Computation (Regular, Context Free) and their Relative powers.
C504.4	Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.
C504.5	Classify a problem with respect to different models of Computation.



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Course Name	Application Development using Python	Semester	5
Course code	18CS55	Batch	2018 - 2022

Course Outcomes

C505.1	Demonstrate proficiency in handling of loops and creation of functions.
C505.2	Identify the methods to create and manipulate lists, tuples and dictionaries.
C505.3	Discover the commonly used operations involving regular expressions and file system.
C505.4	Interpret the concepts of Object-Oriented Programming as used in Python.
C505.5	Determine the need for scraping websites and working with CSV, JSON and other file formats.



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Course Name	Unix Programming	Semester	5
Course code	18CS56	Batch	2018 - 2022

Course Outcomes

C506.1	Understand the basic concepts of UNIX Architecture, File system and basic commands.
C506.2	Illustrate Shell programming and to write Shell scripts.
C506.3	Categorize, compare and make use of Unix system concepts, build an application or service over a Unix system.



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Course Name	Computer Network Laboratory	Semester	5
Course code	18CSL57	Batch	2018 - 2022

Course Outcomes

C507.1	Analyze and Compare various networking protocols.
C507.2	Demonstrate the working of different concepts of networking.
C507.3	Implement, analyze and evaluate networking protocols in NS2 / NS3 and JAVA programming language



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Course Name	Database Management System Laboratory	Semester	5
Course code	18CSL58	Batch	2018 - 2022

Course Outcomes

C508.1	Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
C508.2	Use Structured Query Language (SQL) for database manipulation
C508.3	Design and build simple database systems
C508.4	Develop application to interact with databases.



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Course Name	Environmental Studies	Semester	5
Course code	18CIV59	Batch	2018 - 2022

Course Outcomes

C509.1	Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
C509.2	Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
C509.3	Demonstrate ecology knowledge of a complex relationship between biotic and abiotic components.
C509.4	Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.



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Course Name	System Software and Compilers	Semester	6
Course code	18CS61	Batch	2018 - 2022

Course Outcomes

C601.1	Explain system software.
C601.2	Design and develop lexical analyzers, parsers and code generators.
C601.3	Utilize lex and yacc tools for implementing different concepts of system software.



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Course Name	Computer Graphics and Visualization	Semester	6
Course code	18CS62	Batch	2018 - 2022

Course Outcomes

C602.1	Design and implement algorithms for 2D graphics primitives and attributes.
C602.2	Illustrate Geometric transformations on both 2D and 3D objects.
C602.3	Apply concepts of clipping and visible surface detection in 2D and 3D viewing, Illumination Models.
C602.4	Design suitable hardware and software for developing graphics packages using OpenGL.



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Course Name	Web Technology and Its Application	Semester	6
Course code	18CS63	Batch	2018 - 2022

Course Outcomes

C603.1	Adapt HTML and CSS syntax and semantics to build web pages.
C603.2	Construct and visually format tables and forms using HTML and CSS.
C603.3	Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.
C603.4	Appraise the principles of object oriented development using PHP.
C603.5	Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features.



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Course Name	Data Mining & Data Warehousing	Semester	6
Course code	18CS641	Batch	2018 - 2022

Course Outcomes

C604.1	Identify data mining problems and implement the data warehouse.
C604.2	Write association rules for a given data pattern.
C604.3	Choose between classification and clustering solution.



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Course Name	Non-Conventional Energy Sources	Semester	6
Course code	18CS651	Batch	2018 - 2022

Course Outcomes

C605.1	Describe the environmental aspects of non-conventional energy resources. In Comparison with various conventional energy systems, their prospects and limitations.
C605.2	Know the need of renewable energy resources, historical and latest developments
C605.3	Describe the use of solar energy and the various components used in the energy production with respect to applications like-heating, cooling, desalination, power generation, drying, cooking etc.
C605.4	Appreciate the need of Wind Energy and the various components used in energy generation and know the classifications. : Compare Solar, Wind and bio energy systems, their prospects, Advantages and limitations
C605.5	Understand the concept of Biomass energy resources and their classification, types of biogas Plants- applications. Acquire the knowledge of fuel cells, wave power, tidal power and geothermal principles and applications.



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Course Name	System Software Laboratory	Semester	6
Course code	18CSL66	Batch	2018 - 2022

Course Outcomes

C606.1	Implement and demonstrate Lexer's and Parser's.
C606.2	Evaluate different algorithms required for management, scheduling, allocation and communication used in operating system.



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Course Name	Computer Graphics Laboratory with mini project	Semester	6
Course code	18CSL67	Batch	2018 - 2022

Course Outcomes

C607.1	Apply the concepts of computer graphics.
C607.2	Implement computer graphics applications using OpenG.
C607.3	Implement real world problems using OpenGL.



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Course Name	Mobile Application Development	Semester	6
Course code	18CSMP68	Batch	2018 - 2022

Course Outcomes

C608.1	Build an application using Android development environment.
C608.2	Experiment with the method of storing, sharing and retrieving the data in Android Applications.
C608.3	Examine responsive user interface across wide range of devices.
C608.4	Create a mobile Application by using various components like activity, views, services, content providers and receivers.



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Course Name	Artificial Intelligence and Machine Learning	Semester	7
Course code	18CS71	Batch	2018 - 2022

Course Outcomes

C701.1	Appraise the theory of Artificial Intelligence and Machine learning.
C701.2	Illustrate the working of AI and ML Algorithms.
C701.3	Demonstrate the applications of AI and ML.



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Course Name	Big Data Analytics	Semester	7
Course code	18CS72	Batch	2018 - 2022

Course Outcomes

C702.1	Understand fundamentals of Big Data analytics.
C702.2	Investigate Hadoop framework and Hadoop Distributed File system.
C702.3	Illustrate the concepts of NoSQL using MongoDB and Cassandra for Big Data.
C702.4	Demonstrate the MapReduce programming model to process the big data along with Hadoop tools.
C702.5	Use Machine Learning algorithms for real world big data.
C702.6	Analyze web contents and Social Networks to provide analytics with relevant visualization tools.



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Course Name	Advanced Computer Architecture	Semester	7
Course code	18CS733	Batch	2018 - 2022

Course Outcomes

C703.1	Understand the Multiprocessors, Multicomputer and Parallelism Concepts.
C703.2	Analyze Memory Hierarchy Technology and details of Processors.
C703.3	Analyze Memory Organizations and various Pipelines design.
C703.4	Compare and contrast the parallel architectures.
C703.5	Illustrate parallel programming concepts.



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Course Name	NETWORK MANAGEMENT	Semester	7
Course code	18CS742	Batch	2018 - 2022

Course Outcomes

C704.1	Analyze the issues and challenges pertaining to management of emerging network technologies such as wired/wireless networks and high-speed internets .Formulate possible approaches for managing OSI network model.
C704.2	Apply network management standards and ASN.1 notation formal language to manage practical networks.
C704.3	Use on SNMP for managing the network ,Use RMON for monitoring the behavior of the network.
C704.4	Identify the various components of network and formulate the scheme for the managing them. Describe the principle of network applications.



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Course Name	Energy and Environment	Semester	7
Course code	18CS751	Batch	2018 - 2022

Course Outcomes

C705.1	Understand energy scenario, energy sources and their utilization.
C705.2	Understand various methods of energy storage, energy management and economic analysis.
C705.3	Analyse the awareness about environment and eco system.
C705.4	Understand the environment pollution along with social issues and acts.



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Course Name	Artificial Intelligence and Machine Learning lab	Semester	7
Course code	18CSL76	Batch	2018 - 2022

Course Outcomes

C706.1	Implement and demonstrate AI and ML algorithms.
C706.2	Evaluate different algorithms.



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Course Name	Project Work Phase-1	Semester	7
Course code	18CSP77	Batch	2018 - 2022

Course Outcomes

C707.1	Identify an issue and derive problem related to society, environment, economics, energy and technology.
C707.2	Formulate and analyze the problem and determine the scope of the solution chosen.
C707.3	Determine, dissect and estimate the parameters required in the solution.
C707.4	Evaluate the solution by considering the standard data/objective function and by using appropriate performance metrics.
C707.5	Compile the report and take part in present/publishing the finding in a reputed conference/publications.



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Course Name	INTERNET OF THINGS	Semester	8
Course code	18CS81	Batch	2018 - 2022

Course Outcomes

C801.1	Interpret the impact and challenges posed by IoT networks leading to new architectural models.
C801.2	Compare and contrast the deployment of smart objects and the technologies to connect them to network.
C801.3	Appraise the role of IoT protocols for efficient network communication.
C801.4	Elaborate the need for Data Analytics and Security in IoT.
C801.5	Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry.



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Course Name	Storage Area Networks	Semester	8
Course code	18CS822	Batch	2018 - 2022

Course Outcomes

C802.1	Identify key challenges in managing information & analyse different storage networking technologies Virtualization.
C802.2	Explain Component and the implementation of NAS.
C802.3	Describe NAS Environment and types of back up methods.
C802.4	Illustrate the storage infrastructure and management activities.



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Course Name	Project Work Phase-2	Semester	8
Course code	18CSP83	Batch	2018 - 2022

Course Outcomes

C803.1	Identify an issue and derive problem related to society, environment, economics, energy and technology.
C803.2	Formulate and analyze the problem and determine the scope of the solution chosen.
C803.3	Determine, dissect and estimate the parameters required in the solution.
C803.4	Evaluate the solution by considering the standard data/objective function and by using appropriate performance metrics.
C803.5	Compile the report and take part in present/publishing the finding in a reputed conference/publications.



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Course Name	Technical Seminar	Semester	8
Course code	18CSS84	Batch	2018 - 2022

Course Outcomes

C804.1	Attain, use and develop knowledge in the field of engineering and other disciplines through independent learning and collaborative study.
C804.2	Identify, understand and discuss current, real-time issues.
C804.3	Improve oral and written communication skills.
C804.4	Explore an appreciation of the self in relation to its larger diverse social and academic contexts.
C804.5	Apply principles of ethics and respect in interaction with others.



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Course Name	Internship	Semester	8
Course code	18CSI85	Batch	2018 - 2022

Course Outcomes

C805.1	Ability to understand the technologies applicable, acquire the Professional skills and Specific skill-building.
C805.2	Demonstrate the ability to harness resources and modern tool by analysing challenges and considering opportunities.
C805.3	Communicate and collaborate effectively and appropriately with different professionals in the teams in the work environment through written and oral means.